



Make a gesture and I will tell you what you are miming.

Pantomime recognition in healthy subjects

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Résumé en anglais	<p>The present paper deals with the question of how people recognize tool-use/transitive actions performed by others. The direct-matching hypothesis assumes that transitive gestures produced by others are recognized by directly activating the same gesture engrams used for making the gesture oneself. By contrast, the context hypothesis posits that the observation of the gesture alone is not sufficient, and that additional contextual information is necessary for recognizing the action. The aim of the present paper is to decide between these two hypotheses. To achieve this purpose, we asked healthy older adults (performers) to mime the use of tools (Experiment 1a). Performance was videotaped and presented to healthy younger adults (observers) in two conditions: (1) Naming the tool associated with the gesture made by the performer (naming condition); (2) Choosing the correct name from 10 alternatives (choice condition). Our results indicated that the performance in the naming condition was relatively poor, emphasizing that people are far from perfect at recognizing pantomimes without contextual information. We also found a great variability among observers, suggesting that the same gesture could evoke different tool-use actions. The performance was better in the choice condition. So, observers benefited from the introduction of tool names. This pattern of results could also be explained by a sequence effect, a lexical-decision effect or an item-selection effect. Experiments 1b and 2 ruled out these possibilities. In short, these points make it difficult to believe that people recognize the actions performed by others by directly activating gesture engrams. Our findings are more consistent with the context hypothesis. (C) 2011 Elsevier Srl. All rights reserved.</p>

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